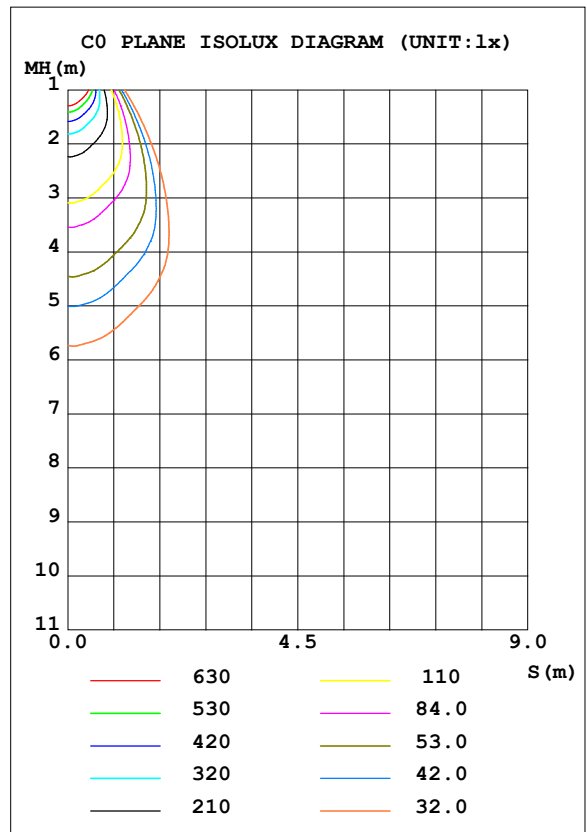
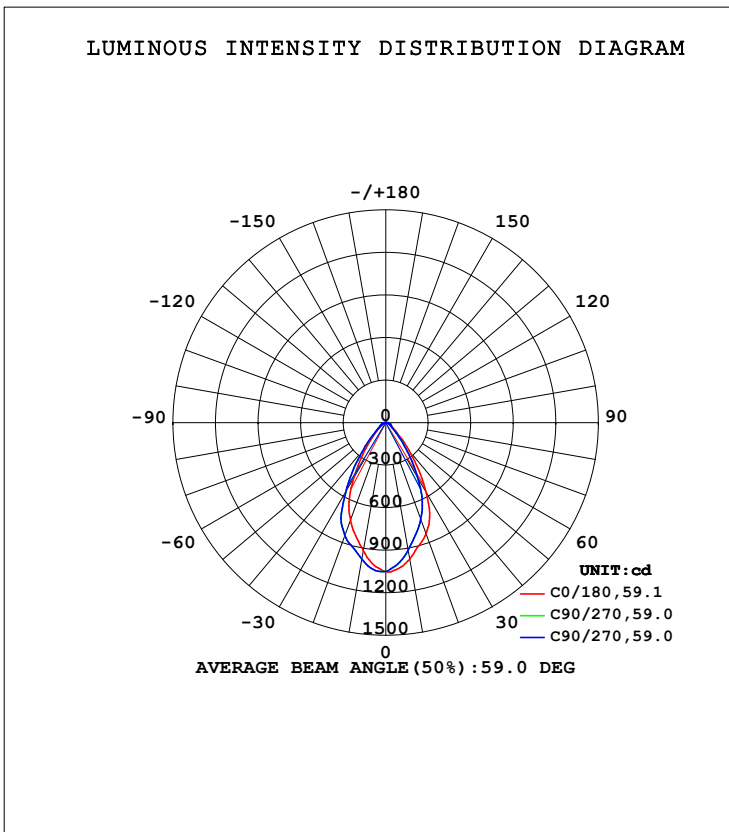


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 84.41 lm/W			
MODEL	DM13W-60DEG 5000K	I _{max} (cd)	1054	S/MH (C0/180)	0.84
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.93
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1077.8	<input type="checkbox"/> UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	1077.83	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 50.0
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	0.95



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 8.690m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

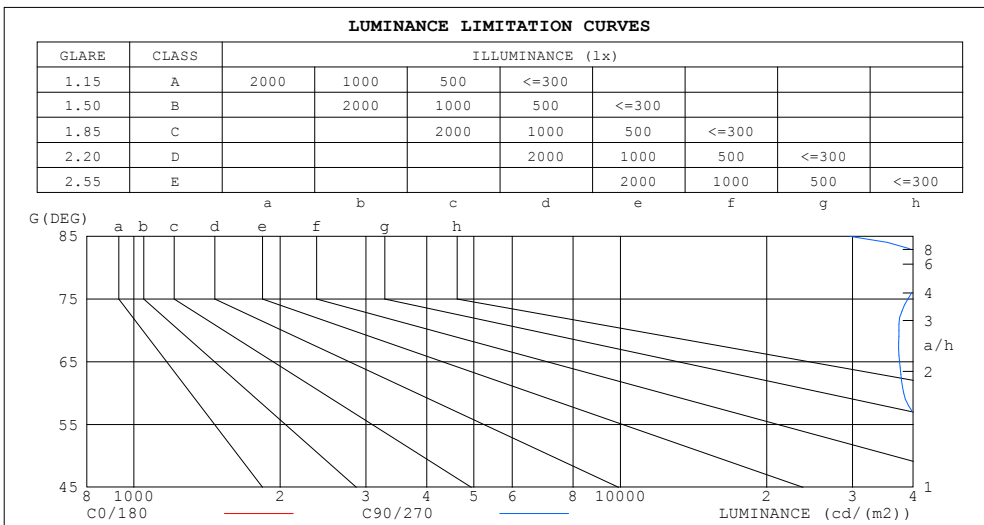
°	C0	C90	C180	C270				°	□ zone	□ total	%lum, lamp
10	975.8	912.4	916.6	977.6				0- 10	94.95	94.95	8.81,8.81
20	833.7	725.3	730.7	845.9				10- 20	242.5	337.5	31.3,31.3
30	573.5	455.0	455.8	567.0				20- 30	304.1	641.6	59.5,59.5
40	256.3	187.4	187.3	245.2				30- 40	220.2	861.8	80,80
50	86.04	66.44	67.21	82.77				40- 50	102.6	964.3	89.5,89.5
60	43.30	38.31	39.26	44.47				50- 60	48.71	1013	94,94
70	29.23	25.61	25.70	29.42				60- 70	33.79	1047	97.1,97.1
80	18.29	14.72	14.52	18.06				70- 80	23.18	1070	99.3,99.3
90	0.1885	0.1587	0.2189	0.1221				80- 90	7.818	1078	100,100
100								90-100			
110								100-110			
120								110-120			
130								120-130			
140								130-140			
150								140-150			
160								150-160			
170								160-170			
180								170-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

0 - 45 DEG Zonal Flux:924.52 %lum: 85.8%
 0 - 60 DEG Zonal Flux:1013 %lum: 94.0%
 All measured values may vary less than 35 %
 from the average measured value in the 0 to 130 deg. zone: 9.6%
 All measured values in the 0 to 130 deg. zone
 may vary less than 50% from the average value of itself: 13.7%

C Range: 0 - 360DEG	□ Range: 0 - 90DEG
C Interval: 90.0DEG	□ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
Temperature:25.3DEG	Humidity:65.0%
Operators:	Test Distance:8.690m [K=1.0000]
Test Date:2022-07-04	Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	53504	29590
80	52763	42297
75	45482	39041
70	42819	37364
65	42328	37520
60	43384	38235
55	49579	41941
50	67054	51579
45	105996	76512

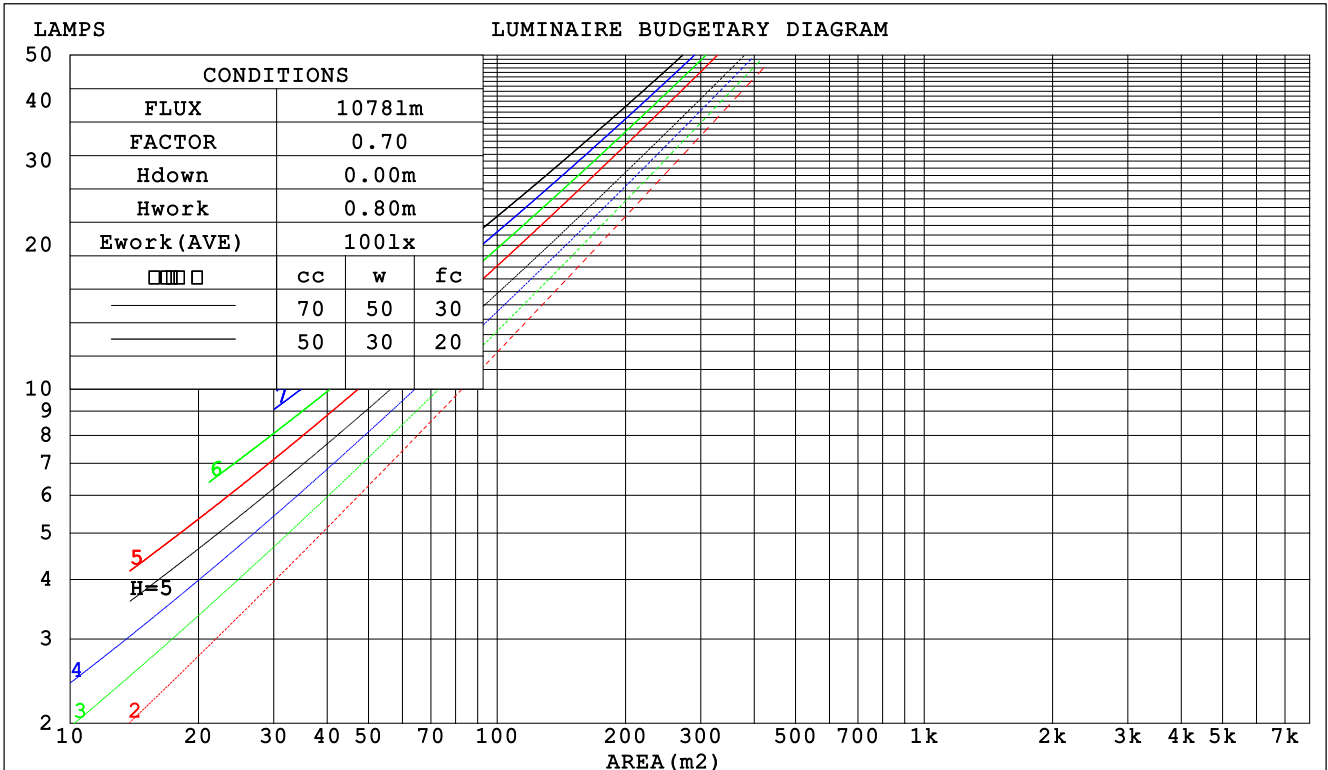
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DMI3W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

□cc	80%			70%			50%			30%			10%			0
□w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
□fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.86	.84	.82
3.0	.92	.86	.81	.90	.85	.80	.87	.83	.79	.85	.81	.78	.83	.79	.77	.75
4.0	.85	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.69
5.0	.78	.72	.67	.77	.71	.67	.76	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.66	.61	.71	.65	.61	.69	.64	.60	.68	.63	.60	.58
7.0	.68	.61	.57	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.53	.49	.59	.53	.49	.58	.53	.49	.57	.52	.48	.57	.52	.48	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.49	.46	.54	.49	.45	.53	.49	.45	.44



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

□ Range: 0 - 90DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DML3W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio		Wall Exitance Coefficients (WEC)			
0.0						
1.0	.215 .122 .039	.208 .119 .038	.195 .112 .036	.183 .106 .034	.173 .100 .032	
2.0	.203 .111 .034	.198 .109 .034	.187 .104 .032	.177 .099 .031	.167 .095 .030	
3.0	.191 .102 .030	.186 .100 .030	.177 .096 .029	.168 .092 .028	.160 .089 .027	
4.0	.180 .094 .028	.176 .092 .027	.168 .089 .027	.160 .086 .026	.153 .083 .025	
5.0	.170 .087 .025	.166 .085 .025	.159 .083 .024	.152 .080 .024	.146 .078 .023	
6.0	.160 .080 .023	.157 .079 .023	.151 .077 .022	.145 .075 .022	.139 .073 .022	
7.0	.152 .075 .021	.149 .074 .021	.143 .073 .021	.138 .071 .021	.133 .069 .020	
8.0	.144 .071 .020	.142 .070 .020	.137 .068 .019	.132 .067 .019	.127 .065 .019	
9.0	.137 .066 .019	.135 .066 .018	.130 .064 .018	.126 .063 .018	.122 .062 .018	
10.0	.131 .063 .017	.129 .062 .017	.125 .061 .017	.121 .060 .017	.117 .059 .017	

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio		Ceiling Cavity Exitance Coefficients (CCEC)			
0.0	.190 .190 .190	.163 .163 .163	.111 .111 .111	.064 .064 .064	.020 .020 .020	
1.0	.174 .157 .142	.149 .135 .122	.102 .093 .084	.059 .054 .049	.019 .017 .016	
2.0	.160 .132 .109	.137 .114 .094	.094 .079 .066	.054 .046 .038	.017 .015 .013	
3.0	.149 .114 .085	.128 .098 .074	.088 .068 .052	.051 .040 .031	.016 .013 .010	
4.0	.140 .099 .069	.120 .086 .060	.083 .060 .042	.048 .035 .025	.015 .011 .008	
5.0	.132 .088 .056	.113 .076 .049	.078 .053 .035	.045 .031 .020	.015 .010 .007	
6.0	.124 .079 .047	.107 .069 .041	.074 .048 .029	.043 .028 .017	.014 .009 .006	
7.0	.118 .072 .040	.101 .062 .035	.070 .044 .024	.041 .026 .015	.013 .008 .005	
8.0	.112 .066 .034	.096 .057 .030	.067 .040 .021	.039 .024 .013	.013 .008 .004	
9.0	.107 .061 .030	.092 .053 .026	.064 .037 .018	.037 .022 .011	.012 .007 .004	
10.0	.102 .056 .026	.088 .049 .023	.061 .034 .016	.036 .020 .010	.012 .007 .003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DMI3W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	25.0	26.1	25.3	26.3	26.5	24.1	25.2	24.3	25.4	25.5
3H	25.6	26.7	25.9	26.9	27.1	24.7	25.8	25.0	26.0	26.2
4H	26.0	27.0	26.3	27.2	27.5	25.1	26.1	25.4	26.3	26.6
6H	26.5	27.4	26.8	27.7	27.9	25.6	26.5	25.9	26.7	27.0
8H	26.8	27.6	27.1	27.9	28.2	25.8	26.6	26.1	26.9	27.2
12H	26.9	27.8	27.3	28.1	28.3	25.8	26.7	26.2	27.0	27.2
4H 2H	25.1	26.1	25.4	26.3	26.5	24.3	25.2	24.5	25.4	25.7
3H	25.9	26.8	26.3	27.1	27.3	25.2	26.0	25.5	26.3	26.6
4H	26.5	27.3	26.9	27.6	27.9	25.8	26.5	26.1	26.8	27.1
6H	27.2	27.9	27.6	28.2	28.6	26.4	27.1	26.8	27.4	27.8
8H	27.6	28.2	28.0	28.5	28.9	26.7	27.3	27.1	27.6	28.0
12H	27.8	28.4	28.2	28.8	29.2	26.8	27.4	27.2	27.7	28.1
8H 4H	26.7	27.3	27.1	27.7	28.1	26.0	26.6	26.4	27.0	27.4
6H	27.6	28.1	28.0	28.5	28.9	26.9	27.4	27.3	27.8	28.2
8H	28.1	28.5	28.5	28.9	29.4	27.2	27.7	27.7	28.1	28.6
12H	28.4	28.8	28.9	29.3	29.7	27.4	27.8	27.9	28.3	28.7
12H 4H	26.7	27.3	27.1	27.7	28.1	26.1	26.6	26.5	27.0	27.4
6H	27.7	28.1	28.1	28.5	29.0	27.0	27.4	27.4	27.8	28.3
8H	28.2	28.6	28.7	29.0	29.5	27.4	27.8	27.9	28.2	28.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.9 / - 0.9					+ 0.7 / - 0.8				
1.5H	+ 1.8 / - 0.8					+ 1.2 / - 0.8				
2.0H	+ 1.4 / - 0.4					+ 0.9 / - 0.5				

CIE Pub.117, 1078 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.3)
Area: 0.002 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:8.690m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

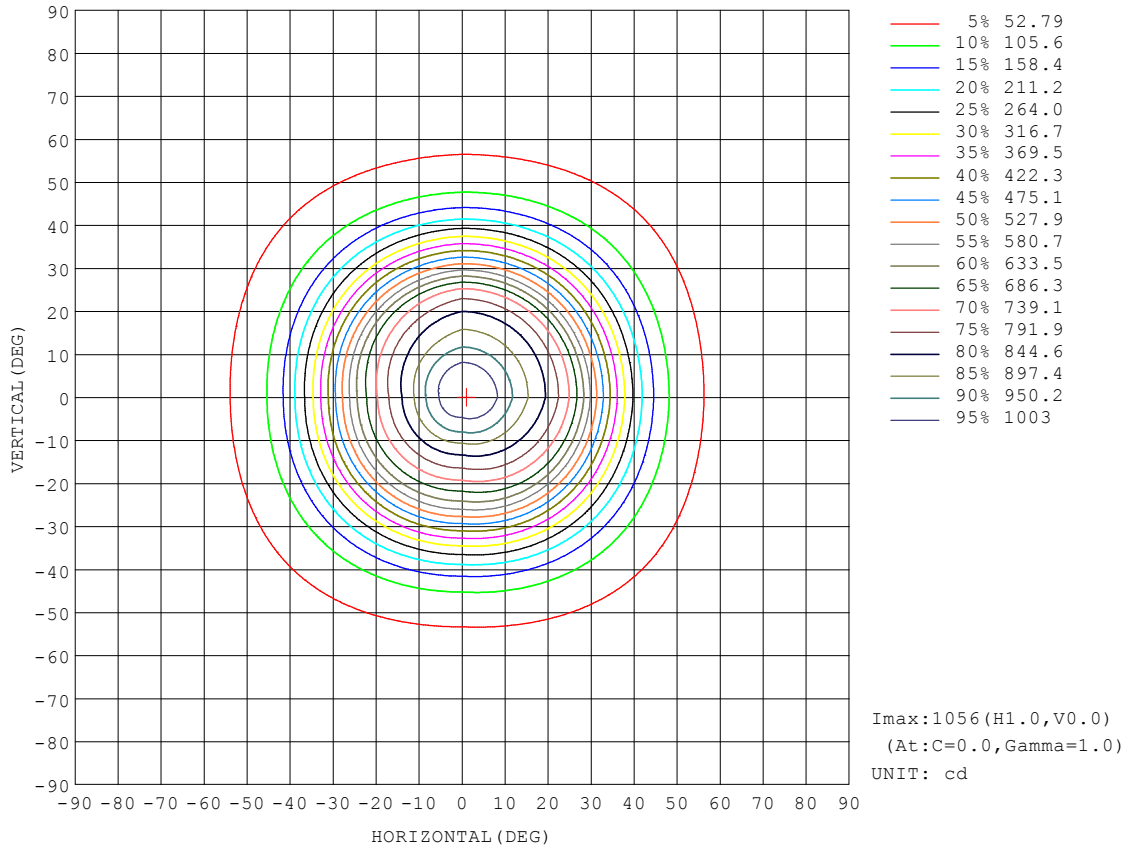
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	71	67	79	71	67	78	71	66	62
0.80	87	80	75	87	80	75	85	79	75	70
1.00	93	86	81	92	85	81	90	86	81	76
1.25	98	91	87	97	91	86	95	89	86	81
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	103	99	95	100	96	93	87
2.50	107	102	98	105	101	98	102	99	96	89
3.00	109	105	101	107	103	100	104	101	98	91
4.00	112	108	105	110	106	104	106	103	101	94
5.00	113	110	108	111	108	106	107	105	103	95
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

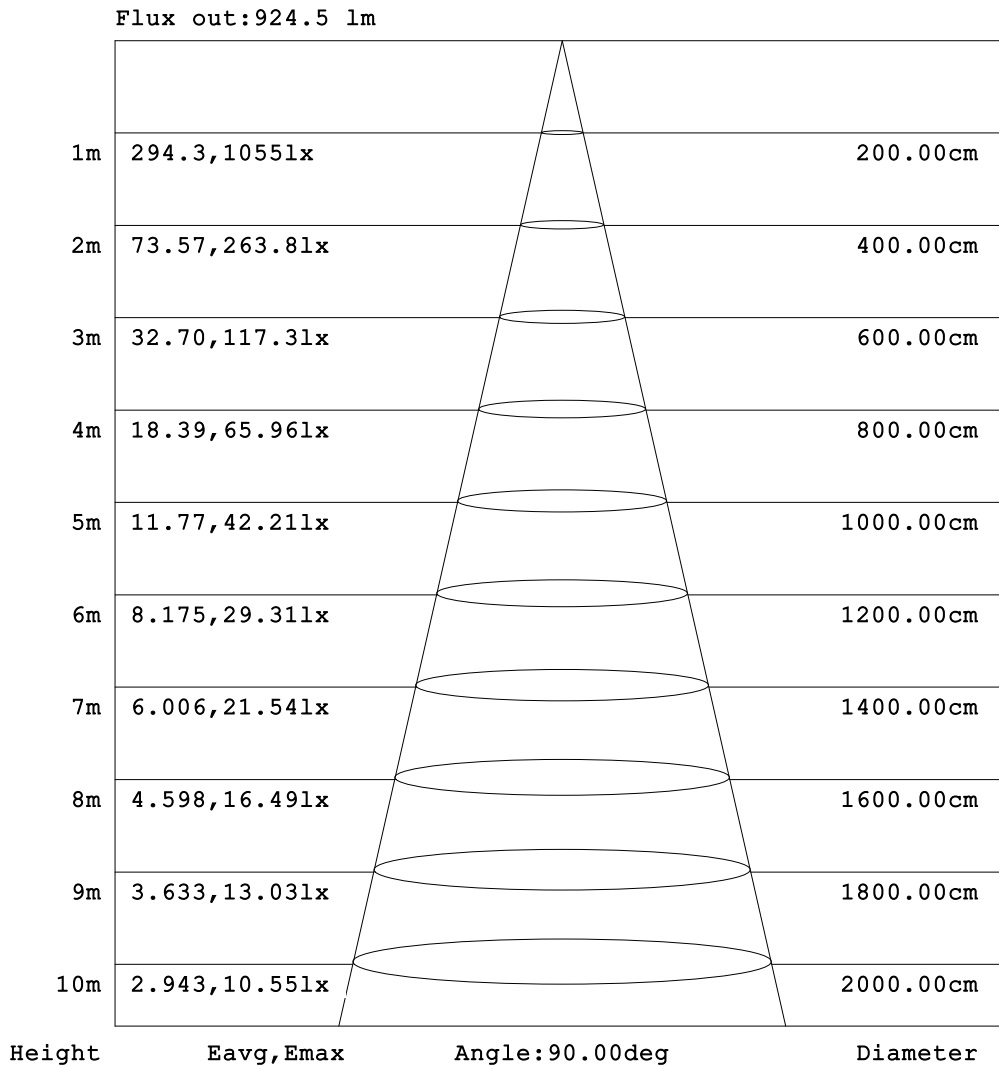


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

AAI Figure

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:



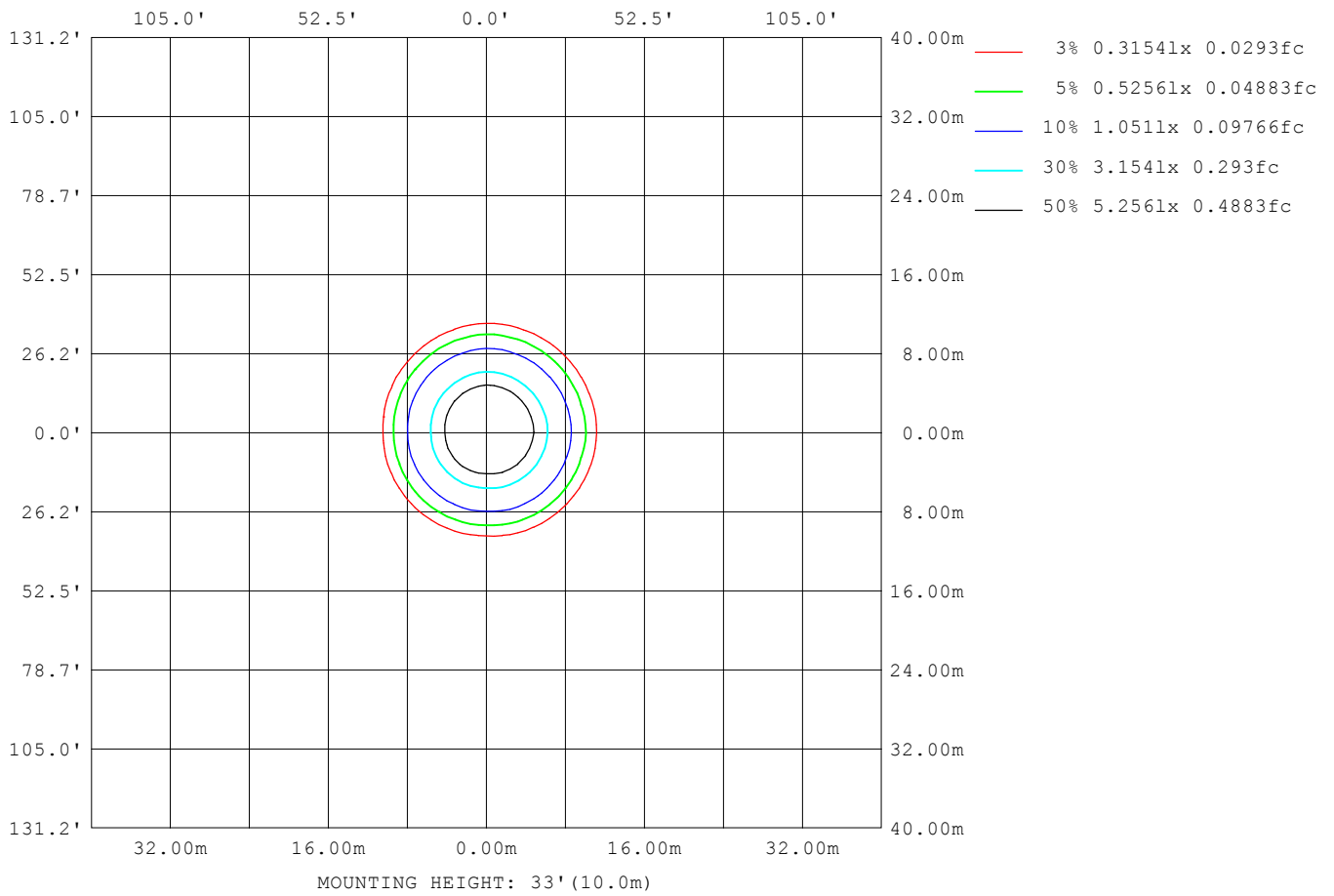
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DM13W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

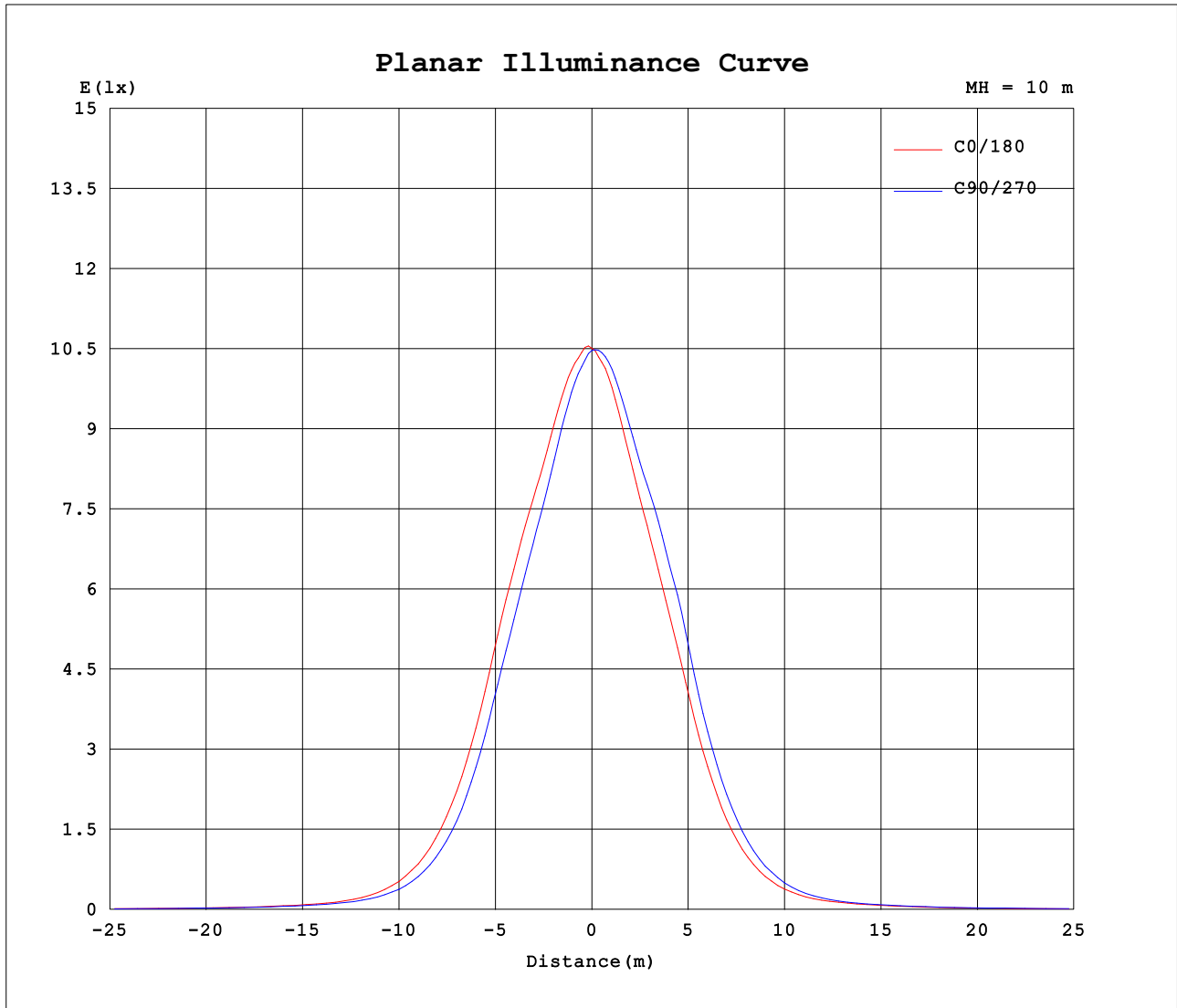
AvgL	cd/m2
L_0~180 (65) av	40176
L_0~180 (75) av	42446
L_0~180 (85) av	38814
L_90~270 (65) av	40354
L_90~270 (75) av	42428
L_90~270 (85) av	37372
L_45 (65) av	40158
L_45 (75) av	42251
L_45 (85) av	37004

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 8.690m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.00V I:0.0577A P:12.769W PF:0.9619 Freq:60.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1077.83x1 lm		
NAME: DMI3W-60DEG 5000K	TYPE: 13W	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.: 1
MFR.:	SUR.: 0.002	Shielding Angle:

Table--1

UNIT: cd

□ (DEG) \ C (DEG)																													
	0	90	180	270																									
0	1049	1049	1049	1049																									
5	1033	1001	1006	1039																									
10	976	912	917	978																									
15	900	818	825	908																									
20	834	725	731	846																									
25	735	611	615	749																									
30	574	455	456	567																									
35	404	304	306	393																									
40	256	187	187	245																									
45	150	108	110	142																									
50	86.0	66.4	67.2	82.8																									
55	56.8	48.2	49.6	57.4																									
60	43.3	38.3	39.3	44.5																									
65	35.7	31.8	32.2	36.4																									
70	29.2	25.6	25.7	29.4																									
75	23.5	20.2	20.4	23.7																									
80	18.3	14.7	14.5	18.1																									
85	9.31	5.17	4.22	7.86																									
90	0.19	0.16	0.22	0.12																									

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-07-04

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:8.690m [K=1.0000]
 Remarks: